



*Advanced  
Technology  
Office*

# **DARPA Tech 2000**

## **WolfPack**

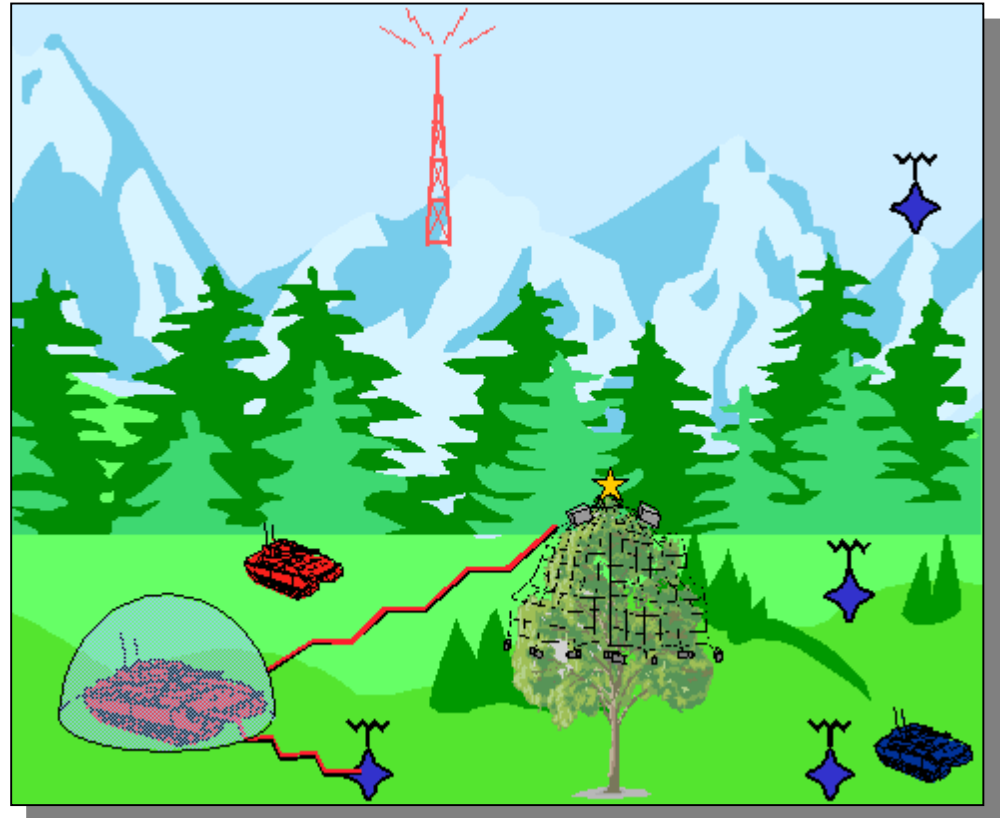
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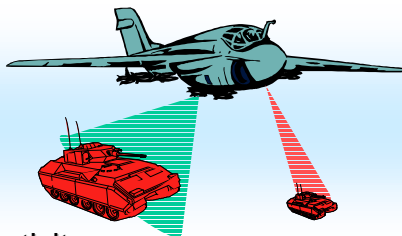
# WolfPack



- Deny the enemy the use of radio communications (20 to 2,500MHz) throughout the battlespace by a distributed network of emplaced autonomous, cooperative jammers and
- Avoid disruption of friendly/neutral radio communications

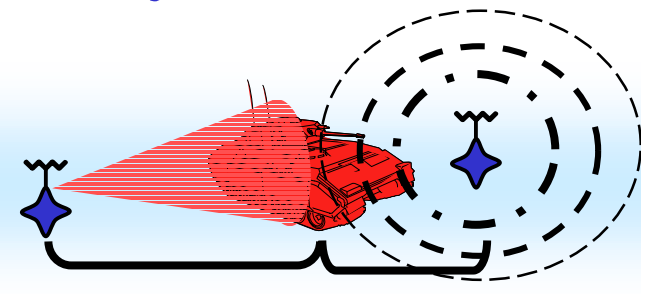


**Precision, distributed jamming over a 100 km by 100 km area**



Power, Directivity

**Location, Network**

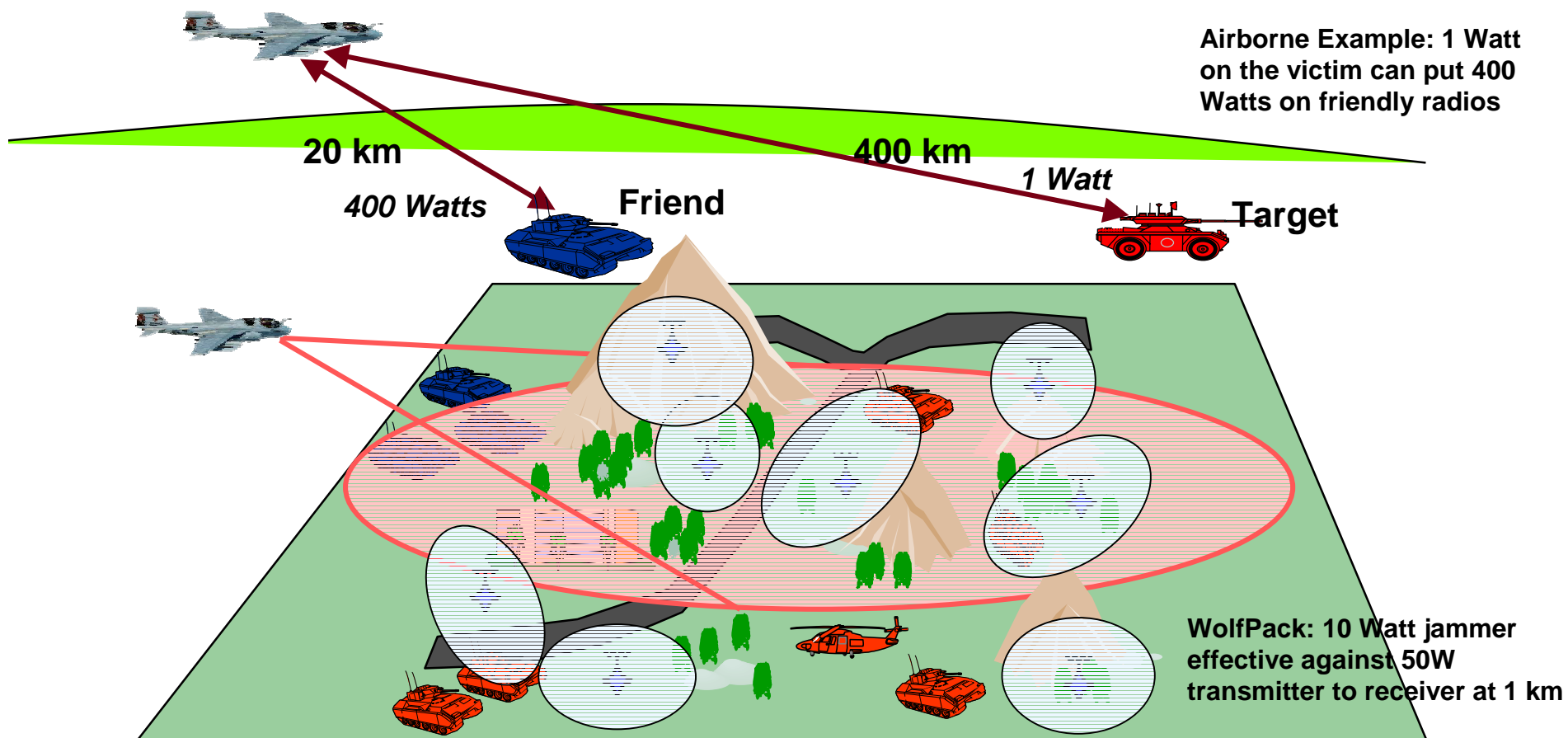


Range, Selectivity



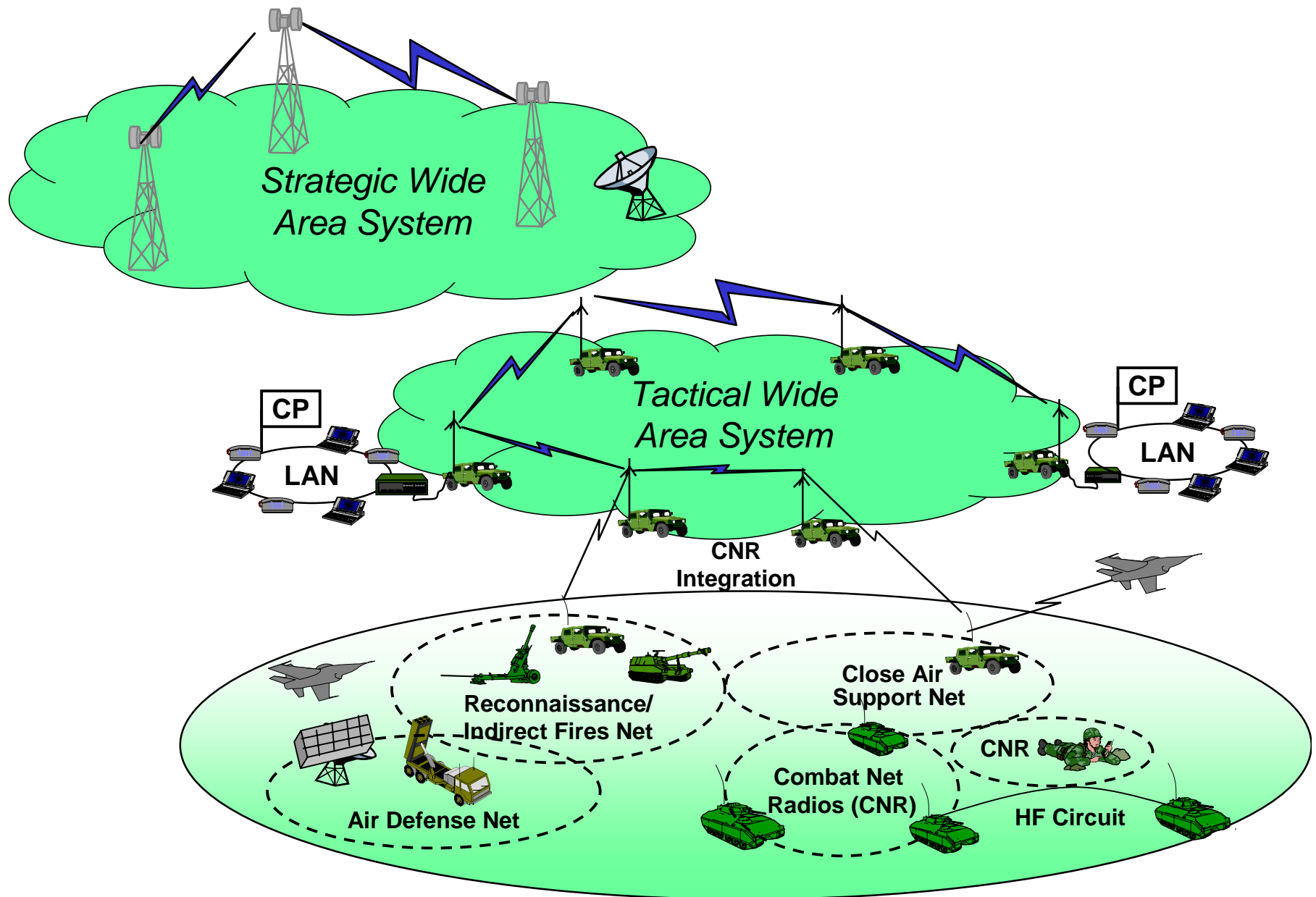
# Distributed Jamming

- Airborne jammers can impact friendly communications (Near-Far Problem)
- WolfPack networked, close-approach jamming concept
  - Precisely reacts to target emitters with low power and energy requirements
  - Significantly reduces Blue communications fratricide



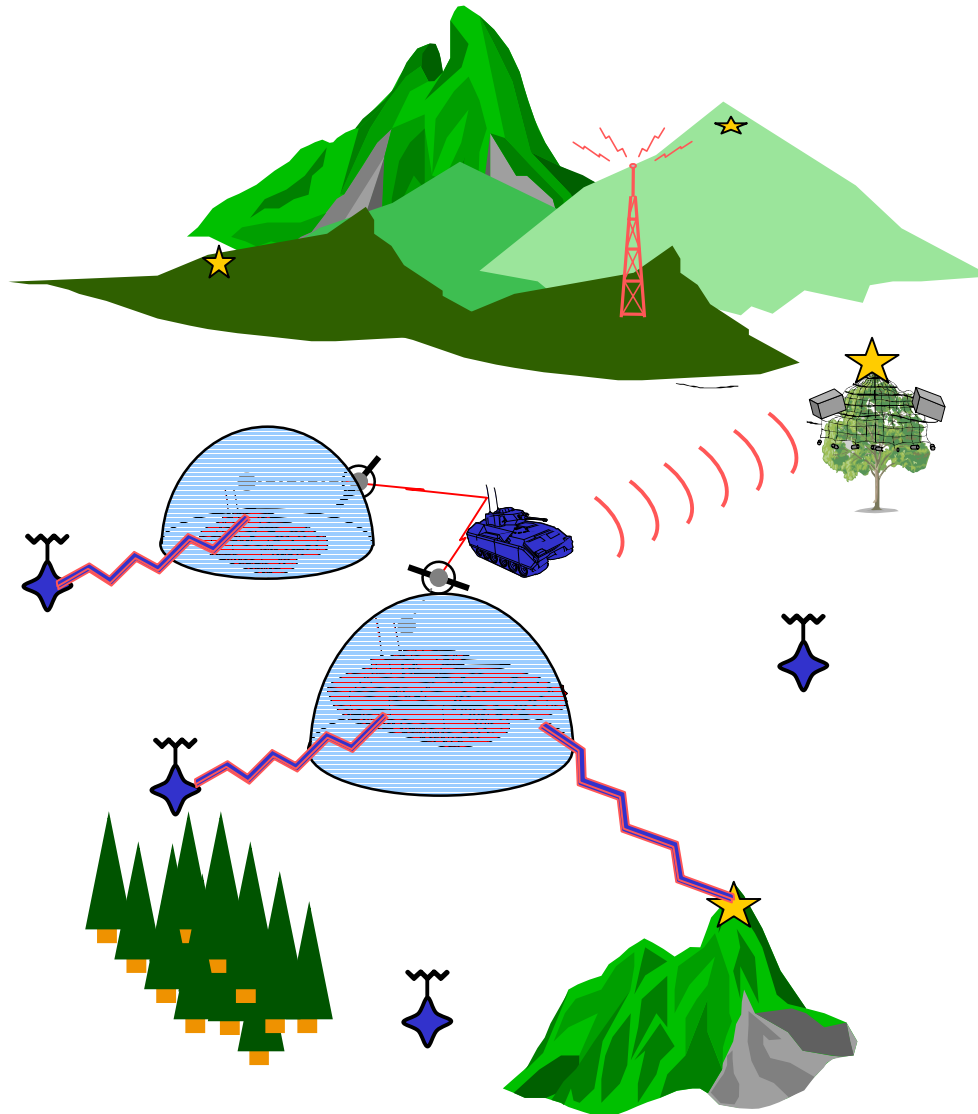


# WolfPack Target Signals



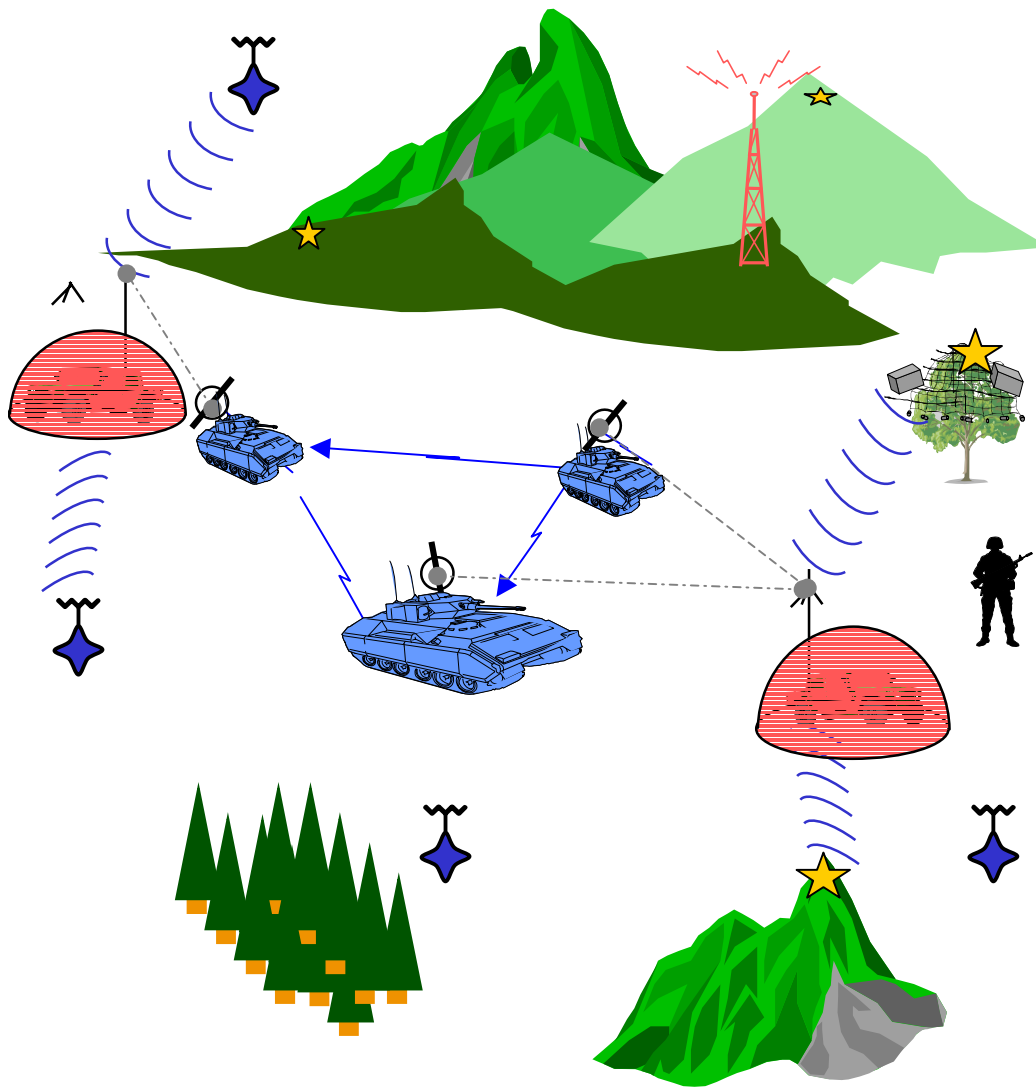


# Prevent Enemy Reporting and Coordination of Ground Forces



## Electronic Counter Measures Mission

- **Spectrum Characterization**
  - System detects transmissions
  - Determines network links and nodes, and projects intent
- **WolfPack Reaction**
  - Prevent (jam) link closure
  - Exfiltrate enemy emitter information
- **Result**
  - Enemy C2 denied and targets identified

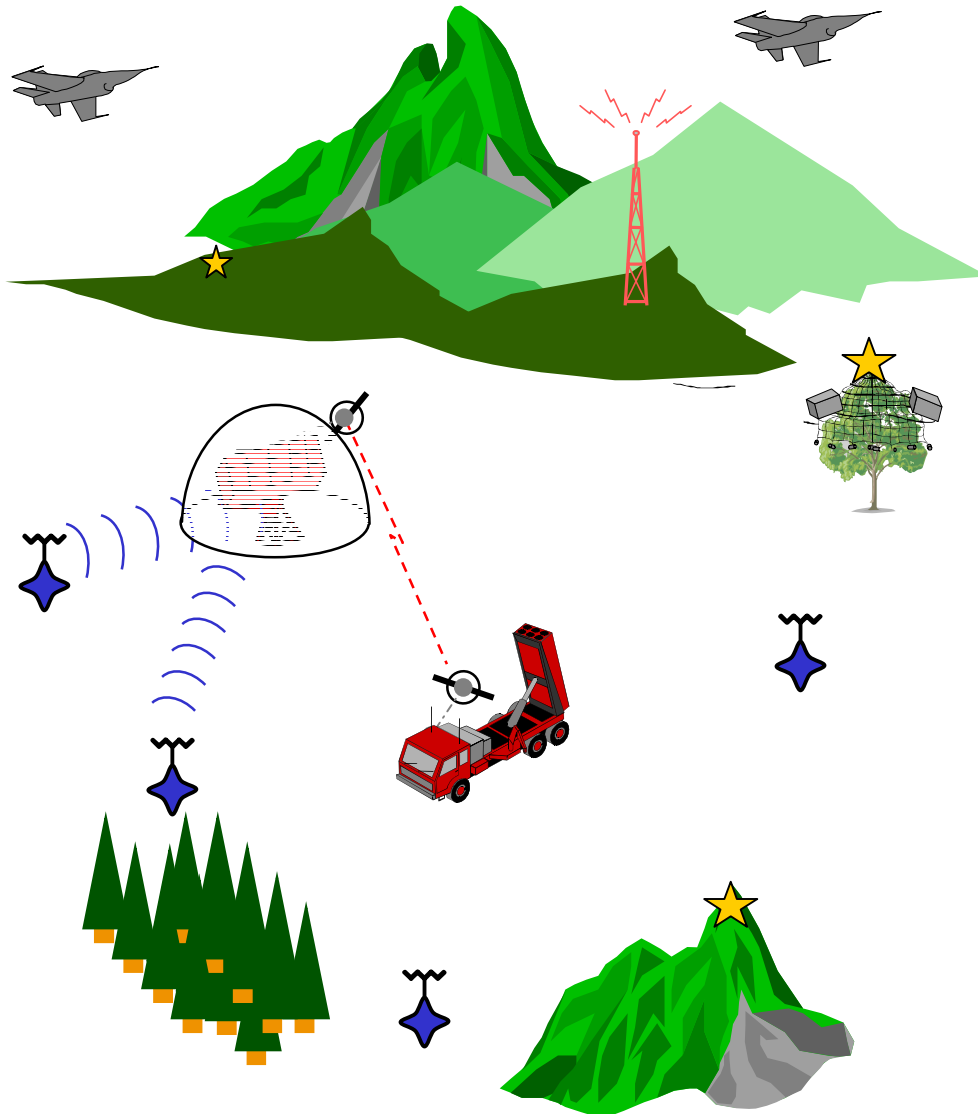


# Electronic Counter Counter Measures Mission

- **Spectrum Characterization**
  - **System detects enemy locations and networks**
  - **Analyzes friendly networks**
- **WolfPack Reaction**
  - **Raise “local noise level” on friendly force frequency**
- **Result**
  - **Friendly transmissions and intentions are masked**



# Disrupt Enemy Integrated Air Defense System



## Suppression of Enemy Air Defense Mission

- **Spectrum Characterization**
  - System deployment characterizes air defense RF environment
- **WolfPack Reaction**
  - Deny communication link
  - Jam radar receiver
  - Geolocate/Target RF nodes
- **Result**
  - Defeats side lobe canceling, PRI-agile radars





# “WolfPack” Technologies

